



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/671,354	09/27/2000	Osamu Okumura	038959.01	8112

25944 7590 04/14/2003

OLIFF & BERRIDGE, PLC
P.O. BOX 19928
ALEXANDRIA, VA 22320

EXAMINER

TON, MINH TOAN T

ART UNIT

PAPER NUMBER

2871

DATE MAILED: 04/14/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/671,354

Applicant(s)

OKUMURA ET AL.

Examiner

Toan Ton

Art Unit

2871

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 November 2002 and 24 January 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 30,31,33-41 and 44-67 is/are pending in the application.
- 4a) Of the above claim(s) 34-36,39-41 and 44-48 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 37,38,60 and 64 is/are allowed.
- 6) ☒ Claim(s) 30-31, 33, 49,50-51,53-56,59, 61-63 and 65-67 is/are rejected.
- 7) ☒ Claim(s) 52,57 and 58 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

Claim Rejections - 35 USC § 103

1. Claims 30-31, 33, 49-50, 53-55, 59, 63, 56, 65, 61, 66, 62, 67 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ohgawara et al (US 5365357).

Ohgawara discloses (Figure 3) a color liquid crystal display device (LCD) comprising color filters formed in both display and peripheral regions of the display device.

In the display region where electrode groups are opposed to each other to perform visual representation, color filters are disposed in pixel portions. In peripheral region (outside of the display region), color filters which are similar to those in the pixel portions of the display region [col. 8, line 42-50].

The regions with no color filters are considered as "second section" (i.e., transparent area). It is noted that the claims reciting "transparent layer" instead of "transparent area" are indicated as allowable subject matter.

Ohgawara discloses the color filters formed in the display portion (i.e., including Applicant's section).

Ohgawara discloses and shows light block layers formed between the color filters.

Limitations such as first and second electrodes (not shown by Ohgawara) are known and common in the art, these are necessary driving elements for a liquid crystal display device.

Therefore, it would have been obvious to one of ordinary skill in the art to employ these common elements as necessary driving elements for the LCD device.

Limitation such as a reflector is known and common for achieving a reflective LCD device, wherein the reflective device yields advantages such no backlight is needed. Therefore,

Art Unit: 2871

it would have been obvious to one of ordinary skill in the art to employ a reflector for a reflective LCD device, wherein the reflective device yields advantages such no backlight is needed.

A typical R/B/G color filter absorbs 1/3 (i.e., 33%) of transmitting light, which overlaps Applicant's range 15%-45%.

The size of the color filters is commonly smaller than the dot area in the art.

The use of switching elements such as TFTs is known in the art for advantages such as cross-talk reduction. Therefore, it would have been obvious to one of ordinary skill in the art to employ TFTs for advantages such as cross-talk reduction.

2. Claim 51 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ohgawara as applied to claims 30-31, 33, 49-50, 53-55, 59, 63, 56, 65, 61, 66, 62, 67 above, and further in view of Sugimoto et al (US4964702).

Sugimoto teaches that the use of a black mask comprising a complementary color to the color filter yields advantages such as free from unevenness of color and misalignment. Therefore, it would have been obvious to one ordinary skill in the art to employ a black mask comprising color filters for achieving advantages such as free from unevenness of color and misalignment.

Allowable Subject Matter

3. Claims 37-38, 60, 64 are allowed. Claims 52 and 57-58 are objected.

Art Unit: 2871

The following is a statement of reasons for the indication of allowable subject matter : the prior art of record does not anticipate nor render obvious to one ordinary skilled in the art a reflective liquid crystal display device comprising a combination of various elements as claimed, more specifically, a combination of the followings : a dot area formed an overlapping portion of the first electrode and second electrode for display, the dot area including a first section and a second section, a color filter arranged in the first section, a transparent layer arranged in the second section (per claims 37-37, 60, 64, 52).

The following is a statement of reasons for the indication of allowable subject matter : the prior art of record does not anticipate nor render obvious to one ordinary skilled in the art a reflective liquid crystal display device comprising a combination of various elements as claimed, a dot area formed an overlapping portion of the first electrode and second electrode for display, the dot area including a first section and a second section, a color filter arranged in the first section, a transparent area arranged in the second section, wherein a first voltage is applied to the first section, a second voltage is applied to the second section, the second voltage is applied to dot area while the first voltage is applied thereto, and each of the voltages is different to the other (claims 57-58).

* Claims 34-36, 39-41 and 44-48 are withdrawn from consideration (nonelected claims).

These claims will be rejoined if they incorporate the allowable subject matter as indicated above.

Art Unit: 2871


Remarks on Applicant's arguments

4. The regions with no color filters are considered as "second section" (i.e., transparent area). It is noted that the claims reciting "transparent layer" instead of "transparent area" are indicated as allowable subject matter.

Contact Information

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to T. TON whose telephone number is (703) 305-3489. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0956.

April 3, 2003


TOANTON
PRIMARY EXAMINER